

PCT

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference 203	FOR FURTHER ACTION See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416)	
International application No. PCT/KR 2003/001851	International filing date (day/month/year) 8 September 2003 (08.09.2003)	Priority Date (day/month/year) 11 September 2002 (11.09.2002)
International Patent Classification (IPC) or national classification and IPC IPC⁷: 61K35/78		
Applicant SK CHEMICALS, CO., LTD.		

- This international preliminary examination report has been prepared by this International Preliminary Examination Authority and is transmitted to the applicant according to Article 36.
- This REPORT consists of a total of 6 sheets, including this cover sheet.

☐ This report is also accompanied by ANNEXES, i.e., sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).

These annexes consist of a total of _____ sheets.

- This report contains indications relating to the following items:
 - ☒ Basis of the opinion
 - ☐ Priority
 - ☒ Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
 - ☐ Lack of unity of invention
 - ☒ Reasoned statement under Rule 66.2(a)(ii) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
 - ☐ Certain documents cited
 - ☒ Certain defects in the international application
 - ☐ Certain observations on the international application

Date of submission of the demand 06.04.2004	Date of completion of this report 25 February 2005 (25.02.2005)
Name and mailing address of the IPEA/AT Austrian Patent Office Dresdner Straße 87 A-1200 Vienna Facsimile No. 1/53424/200	Authorized officer KRENN M. Telephone No. 1/53424/435

Form PCT/IPEA/409 (cover sheet) (July 1998)

Express Mail No. EV195875353US

I. Basis of the report1. With regard to the **elements** of the international application:*

- ☒ the international application as originally filed
- ☐ the description:
pages _____, as originally filed
pages _____, filed with the demand
pages _____, filed with the letter of _____
- ☐ the claims:
pages _____, as originally filed
pages _____, as amended (together with any statement) under Article 19
pages _____, filed with the demand
pages _____, filed with the letter of _____
- ☐ the drawings:
pages _____, as originally filed
pages _____, filed with the demand
pages _____, filed with the letter of _____
- ☐ the sequence listing part of the description:
pages _____, as originally filed
pages _____, filed with the demand
pages _____, filed with the letter of _____

2. With regard to the **language**, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

These elements were available or furnished to this Authority in the following language _____ which is:

- ☐ the language of a translation furnished for the purposes of international search (under Rule 23.1(b)).
- ☐ the language of publication of the international application (under Rule 48.3(b)).
- ☐ the language of the translation furnished for the purposes of international preliminary examination (under Rule 55.2 and/or 55.3).

3. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

- ☐ contained in the international application in printed form.
- ☐ filed together with the international application in computer readable form.
- ☐ furnished subsequently to this Authority in written form.
- ☐ furnished subsequently to this Authority in computer readable form.
- ☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
- ☐ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

4. ☐ The amendments have resulted in the cancellation of:

- ☐ the description, pages _____
- ☐ the claims, Nos. _____
- ☐ the drawings, sheets/fig _____

5. ☐ This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).**

* Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as „originally filed“ and are not annexed to this report since they do not contain amendments (Rules 70.16 and 70.17).

** Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.

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III. Non-establishment of opinion with regard to novelty, inventive step and industrial applicability

1. The questions whether the claimed invention appears to be novel, to involve an inventive step (to be non obvious), or to be industrially applicable have not been examined in respect of:

☐ the entire international application,

☒ claims Nos. 3, 4.

because:

☒ the said international application, or the said claims Nos. 3, 4 relate to the following subject matter which does not require an international preliminary examination (*specify*):

A preparation method has to be characterized by its process steps and not by the composition of the product.

☐ the description, claims or drawings (*indicate particular elements below*) or said claims Nos. are so unclear that no meaningful opinion could be formed (*specify*):

☐ the claims, or said claims Nos. are so inadequately supported by the description that no meaningful opinion could be formed.

☐ no international search report has been established for said claims Nos.

2. A meaningful international preliminary examination cannot be carried out due to the failure of the nucleotide and/or amino acid sequence listing to comply with the standard provided for in Annex C of the Administrative Instructions:

☐ the written form has not been furnished or does not comply with the standard.

☐ the computer readable form has not been furnished or does not comply with the standard.

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V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

I. Statement	Novelty (N)	Claims 1, 2, 5, 8	YES
		Claims 6, 7, 9	NO
	Inventive step (IS)	Claims 1, 2, 5	YES
		Claims 6-9	NO
	Industrial applicability (IA)	Claims 1, 2, 5-9	YES
		Claims ----	NO

Citations and explanations (Rule 70.7)

KR 163813 B1 refers to a method of extracting active ingredients, e.g. Loganin, from stems and leaves of *Lonicera japonica* consisting in extracting the dry herb with water, filtering the extract, adding a water-saturated low grade alcohol to the resulting filtrate to separate layers, concentrating the resulting low grade alcohol layer under reduced pressure and obtaining a powdered extract.

The abstracts of Lee S.J. et al. reveal that the n-butanol fraction of *Lonicera japonica* containing among others lonicerin and loganin provides an anti-inflammatory activity. The paper of Moon T.C. et al. shows the anti-inflammatory effect of certain isolated flavanoids of *Lonicera japonica*.

The article of Recio de Carmen M. et al. deals with the anti-inflammatory activity of iridoids, e.g. loganin.

KR 267060 B discloses analgesic biflavonoids, which can be extracted from *Ginkgo*, *Lonicera japonica* and *Selaginella tamarsina*.

KR 163813 B1 as well as the papers published by Lee S.J. et al. do not mention final purification steps (see step b); thus the subject matter of claims 1,2 and 5 is new as well as inventive.

Product claims directed to an anti-inflammatory/analgesic drug comprising sweroside and/or loganin (claims 6,7 and 9) are neither new nor inventive, because their activity is well shown in the articles of Lee S.J. et al., Recio de Carmen M. et al.

Claim 8 referring to the administration form of said flavanoids is formally new but not inventive, because it is evident for anyone versed in the art to administer an active agent in the form of a tablet, etc..

Claims 3 and 4: see Box III.

Industrial applicability is given for claims 1, 2 and 5-9.

The article of Kwak W.J. et al. published within the priority term describes the isolation of lonicerin C from *Lonicera japonica*. As none of the claims is directed to lonicerin C, the document is without any relevance for novelty resp. inventive step of the present subject matter.

The paper of Tae J. et al. focuses on the anti-inflammatory effect of an aqueous extract of *Lonicera japonica*. As an extract is different from the product derived from the

Supplemental Box

(To be used when the space in any of the preceding boxes is not sufficient)

Continuation of: **Box V (page 1)**

extraction with butanol, also said document has no impact on novelty resp. inventive step of the present subject matter.

VII. Certain defects in the international application

The following defects in the form or contents of the international application have been noted:

As the low grade alcohol is considered to be an essential feature of the claimed preparation method, it has to be defined in claim 1.

In claim 1 essential process steps are lacking, e.g. the concentration step under reduced pressure after the filtration of the extract and the filtration step after the addition of the low grade alcohol.

A product claim focusing on concrete ingredients (claims 6,7,9) cannot refer to a product by process claim, which exact composition is unclear.